

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 2, 7, and 10-32 are pending in the present application, Claims 1, 11, 26, and 30 having been amended, Claim 32 having been added, and Claims 3-6, 8, and 9 having been previously canceled without prejudice or disclaimer. Claims 1, 11, 26, and 30 are amended to correct minor informalities and no new matter is added. Support for new Claim 32 is found in Fig. 1, for example, and no new matter is added.

In the outstanding Office Action, Claim 30 was objected to; Claim 30 was rejected under 35 U.S.C. §112, second paragraph; Claims 1, 2, 7, 10-12, 14-17, and 21-31 were rejected under 35 U.S.C. §102(b) as anticipated by Richard, III (U.S. Patent No. 5,654,751, hereinafter Richard); and Claim 13 was rejected under 35 U.S.C. §103(a) as unpatentable over Richard in view of Wei et al. (U.S. Patent No. 6,515,967, hereinafter Wei); and Claims 18 and 20 were rejected under 35 U.S.C. §103(a) as unpatentable over Richard.

With respect to the objection Claim 30 and rejection of Claim 30 under 35 U.S.C. §112, second paragraph, Claim 30 is amended as suggested in the outstanding Office Action. Thus, the objection of Claim 30 and the rejection of Claim 30 under 35 U.S.C. §112, second paragraph are overcome.

Claim 1 is directed to an apparatus for diagnosis of video device performance in transferring audio visual data over a video network. The apparatus includes a physical network interface operable to receive audio visual data associated with the video device. A diagnostic tool is operable to access the audio visual data as the audio visual data travels over the video network. A diagnostic engine is interfaced with the diagnostic tool and is operable to determine performance statistics by analysis of the audio visual data accessed with the diagnostic tool.

In a conventional video teleconferencing system, when a video call is established between video endpoints, the audio visual data is not accessible at a packet level or codec level as the audio visual data is routed between the endpoints and through various video devices. Generally, video devices are designed to pass through audio visual data without extensive processing in order to avoid delays in the video conference presentation. For example, the H.323 video conference protocol enables services such as call forwarding, but avoids exposing audio visual data to a packet level or CODEC level as the data passes through the network nodes. When quality problems arise, the inaccessibility of the audio visual data (as it is traveling between video end points during a video conference) is problematic<sup>1</sup>

The claimed invention solves the above-noted problems of the conventional system by providing for real-time (i.e. during the teleconference) monitoring and diagnosis of video device performance.<sup>2</sup> The claimed invention offers the advantage of easily interfacing with the video network to allow a packet level or CODEC level evaluation of the audio visual data, otherwise unavailable due to the inaccessibility of the audio visual data.<sup>3</sup> Another advantage of the claimed invention is that the analysis of the audio visual data is performed without introducing significant delays in the transfer of the audio visual data between video endpoints during a teleconference.<sup>4</sup>

For example, in a non-limiting embodiment of claimed invention, a diagnostic node is deployed as an H.323 endpoint or as an H.323 passthrough/proxy to provide diagnosis of video device performance in a transparent manner (i.e. with minimal interruption to the ongoing teleconference).<sup>5</sup>

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<sup>1</sup> Specification, page 3, lines 6-17.

<sup>2</sup> Specification, page 4, lines 6-9.

<sup>3</sup> Specification, page 5, lines 22-25.

<sup>4</sup> Specification, page 5, line 30 to page 6, line 3.

<sup>5</sup> Specification, page 6, lines 4-7.

Turning now to the rejections based on art, Applicants respectfully traverse the rejection of Claim 1 as anticipated by Richard. Claim 1 recites, *inter alia*, “a diagnostic tool operable to access the audio visual data as said audio visual data travels over said video network between at least two video endpoints.” Richard does not describe or suggest, at least this element of Claim 1.

Richard describes a testing jig or testing circuit board to test the operation of a decoder in a set-top box of an entertainment device. The testing jig, as shown in Fig. 6, interfaces with an encoder to facilitate analysis of the digital video output of the encoder and performance of the decoder.<sup>6</sup> The testing jig may be inserted in the system to provide a bypass from the encoder directly to the set-top box.<sup>7</sup> Thus, the video network shown in Fig. 3 (with endpoints 301 and 312) is bypassed for the purpose of testing. While testing is occurring, data being tested is not flowing through the video network. A new connection is created between the encoder and the testing jig because the testing jig only needs to receive the input of the encoded video source at the head end of the video network.<sup>8</sup> Richard itself describes this process as “bypassing the network.”<sup>9</sup> Thus, Richard does not describe or suggest a diagnostic tool operable to access the audio visual data as the audio visual data travels over the video network.

In another embodiment of the testing jig described in Richard, the testing jig may be portable. In this embodiment, the testing jig has the capability of coupling to various network interfaces. Coupling to various network interfaces provides isolation of the network, coder, and decoder.<sup>10</sup> When the testing jig is portable, a stored video is included in the interface and there is no separate encoder.<sup>11</sup> As shown in Fig. 7, the testing jig is not connected to an

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<sup>6</sup> Richard, col. 5, lines 35-40.

<sup>7</sup> Richard, col. 5, lines 41-42.

<sup>8</sup> Richard, col. 11, lines 44-48.

<sup>9</sup> Richard, col. 6, line 36.

<sup>10</sup> Richard, col. 6, lines 1-15.

<sup>11</sup> Richard, col. 6, lines 36-38.

encoder, but includes stored test sequence patterns. The data, because it originates from the stored sequence patterns, does travel over the video network. Thus, when the testing jig is mobile, the testing jig is not part of the video network and cannot access the audio visual data as the audio visual travels over the video network.

In view of the above-noted distinctions, Applicants respectfully submit that Claim 1 (and its dependent Claims 2-13, and 32) patentably distinguish over Richard. Claims 14 and 21 are similar to Claim 1. Applicants respectfully submit that Claims 14 and 21 (and their dependent Claims 15-25) patentably distinguish over Richard for at least the reasons given for Claim 1. Claim 26 includes subject matter similar to Claim 1. Applicants respectfully submit that Claim 26 (and its dependent Claims 27-31) patentably distinguishes over Richard for at least the reasons given for Claim 1.

Accordingly, in view of the present amendment and in light of the previous discussion, Applicants respectfully submit that the present application is in condition for allowance and respectfully request an early and favorable action to that effect.

Respectfully submitted,

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